This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (original): An integrated circuit package comprising:

a substrate having first and second surfaces and a plurality of conductive traces therebetween;

a semiconductor die flip-chip mounted to said first surface of said substrate and electrically connected to ones of said conductive traces;

an intermetallic heat spreader fixed to a back side of said semiconductor die; and

a plurality of contact balls disposed on said second surface of said substrate, in the form of a ball grid array, ones of said contact balls of said ball grid array being electrically connected with ones of said conductive traces.

Claim 2 (original): The integrated circuit package according to claim 1, wherein said semiconductor die is flip-chip mounted to said first surface of said substrate and electrically connected to ones of said conductive traces via a plurality of solder ball connectors.

Claim 3 (original): The integrated circuit package according to claim 2, further comprising an underfill material surrounding said solder ball connectors.

Claim 4 (original): The integrated circuit package according to claim 1, wherein said solder ball connectors are comprised of eutectic solder.

Claim 5 (original): The integrated circuit package according to claim 1, wherein

said intermetallic heat spreader is fixed to said back side of said semiconductor die by a thermally conductive adhesive.

Claim 6 (original): The integrated circuit package according to claim 1, wherein said intermetallic heat spreader is fixed to said back side of said semiconductor die by a thermally conductive epoxy.

Claim 7 (original): The integrated circuit package according to claim 1, wherein said intermetallic heat spreader comprises a first portion fixed to said back side of said semiconductor die and a plurality of sidewalls in contact with said substrate.

Claim 8 (original): The integrated circuit package according to claim 7, wherein said sidewalls are fixed to said substrate.

Claim 9 (original): The integrated circuit package according to claim 1, wherein said heat spreader is fixed to a plurality of intermediate sidewalls at a plurality of sites, each of said intermediate sidewalls being fixed to said substrate.

Claim 10 (original): The integrated circuit package according to claim 9, wherein said intermediate sidewalls comprise an intermetallic material.

Claim 11 (original): The integrated circuit package according to claim 1, wherein said intermetallic compound comprises an intermetallic compound having a coefficient of thermal expansion of from about 18 ppm/°C to about 26 ppm/°C.

Claim 12 (original): The integrated circuit package according to claim 1, wherein said intermetallic compound comprises an intermetallic compound having a coefficient

of thermal expansion of about 22 ppm/°C.

Claim 13 (original): The integrated circuit package according to claim 1, wherein intermetallic compound comprises $CuAl_3$.

Claim 14 (original): The integrated circuit package according to claim 1, wherein said intermetallic compound has a modulus of elasticity of at least the modulus of elasticity of the semiconductor die.

Claim 15 (original): The integrated circuit package according to claim 1, wherein said intermetallic compound comprises NiAl.

Claim 16 (previously presented): An integrated circuit package comprising:

a substrate having first and second surfaces and a plurality of conductive traces therebetween;

a semiconductor die flip-chip mounted to said first surface of said substrate and electrically connected to ones of said conductive traces;

an intermetallic heat spreader having a coefficient of thermal expansion in the range of about 18 ppm/°C to about 26 ppm/°C, fixed to a back side of said semiconductor die; and

a plurality of contact balls disposed on said second surface of said substrate, in the form of a ball grid array, ones of said contact balls of said ball grid array being electrically connected with ones of said conductive traces; wherein

an intermetallic compound of said intermetallic heat spreader has a modulus of elasticity equal to or greater than a modulus of elasticity of the semiconductor die.

Claim 17 (original): The integrated circuit package according to claim 16, wherein the heat spreader has a coefficient of thermal expansion of about 22 ppm/°C.

Claim 18 (canceled).